# Lincoln Park Multimodal Study

## Analysis & Recommendations for Surface Transportation Assets in the Lincoln Park Neighborhood of Duluth, Minnesota



**Prepared by the Duluth-Superior Metropolitan Interstate Council**

**April 2016**

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*Duluth and Superior urban area communities cooperating in planning and development through a joint venture of the Arrowhead Regional Development Commission and the Northwest Regional Planning Commission*

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# Executive Summary

## Introduction & Background

This document presents the analyses and findings of a study done of the publicly owned surface transportation system in the Lincoln Park neighborhood in Duluth, Minnesota. The purpose of the study was to determine the existence of potential issues and opportunities regarding the future of motorized and non-motorized modes of transportation in the neighborhood. The objectives of the study were organized under the following perspectives:

*"Multimodal" perspective:* Pursuing improvements that give people the options to use different modes of transportation, or to combine different modes, to satisfy their trip needs.

*"Public investment" perspective:* Seeking transportation improvements while also appreciating and accounting for the financial realities associated with maintaining those improved assets into the future.

*"Future opportunities" perspective:* Scanning the horizon for opportunities to enhance multimodal transportation through future development and reconstruction, as well as using the present and near future to figure out ways to combine and finance such opportunities for implementation in more distant years.

This study was unique in that its development occurred alongside that of the City of Duluth's Lincoln Park Small Area Plan (SAP). Findings from research and stakeholder engagement were shared between the efforts, ultimately influencing the recommendations of each other. As such, the recommendations of from this study reflect the development of the city's SAP and, in turn, the SAP has incorporated many of the recommendations of this study.

## Principal Findings

The Federal Highway Administration (FHWA) defines "multimodal" as: the availability of transportation options using different modes within a transportation system or travel corridor.[1] Although FHWA's definition emphasizes the availability of transportation choices, this study also considers aspects of multimodalism regarding connectivity, integration, mobility, and the safety of those choices within and around Lincoln Park.

## Primary Recommendations

In general, this study calls for a coordinated effort among regional transportation partners (e.g. the City of Duluth, DTA, MnDOT, the MIC, and others) to create more multimodal opportunities and bring greater multimodal integration to the Lincoln Park neighborhood. The study proposes a number of strategies and actions to accomplish those objectives, including low-cost improvements, such as pavement markings, in the short-range and planning for larger-scale improvement projects, such as street redesigns, in the longer range. While it is not likely that every recommendation can be implemented, this study calls for regional transportation partners, including private developers, to work together in pursuit of opportunities to package improvements and

achieve cost savings.

## Limitations

This study was subject to limitations regarding both time and financial resources. As scoped, the project was conducted within a year, with limited staffing and relied primarily on existing data produced by secondary sources. As a consequence, support for some findings is stronger than others and is the reason that a number of the study's recommendations call for additional monitoring or data collection.

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# Glossary of Acronyms

AADT - Annual average daily traffic

BCI - Bike compatibility index

CBD - Central business district

DTA - Duluth Transit Authority

FHWA - Federal Highway Administration

HCAADT - Heavy commercial annual average daily traffic

HCM - Highway Capacity Manual (FHWA)

LOS - Level of service

MIC - Metropolitan Interstate Council

mmLOS - Multimodal levels of service

MnCMAT—MnDOT Crash Mapping Analysis Tool

MnDOT - Minnesota Department of Transportation

NACTO - National Association of City Transportation Officials

NCHRP - National Cooperative Highway Research Program (TRB)

SAP - Small area plan

TRB - Transportation Research Board

# 1. Introduction & Background

## Purpose and Scope

This document presents the findings of a transportation assessment conducted in the Lincoln Park neighborhood of Duluth, Minnesota (see Map 1.1) from June 2014 to April 2015. It was done in conjunction with the development of a small area plan (SAP) for the neighborhood led by the Planning Department for the City of Duluth. In addition to being part of ongoing transportation planning in the Duluth-Superior metropolitan area, the findings of this study were intended to inform the policies and actions ultimately called for by the SAP.

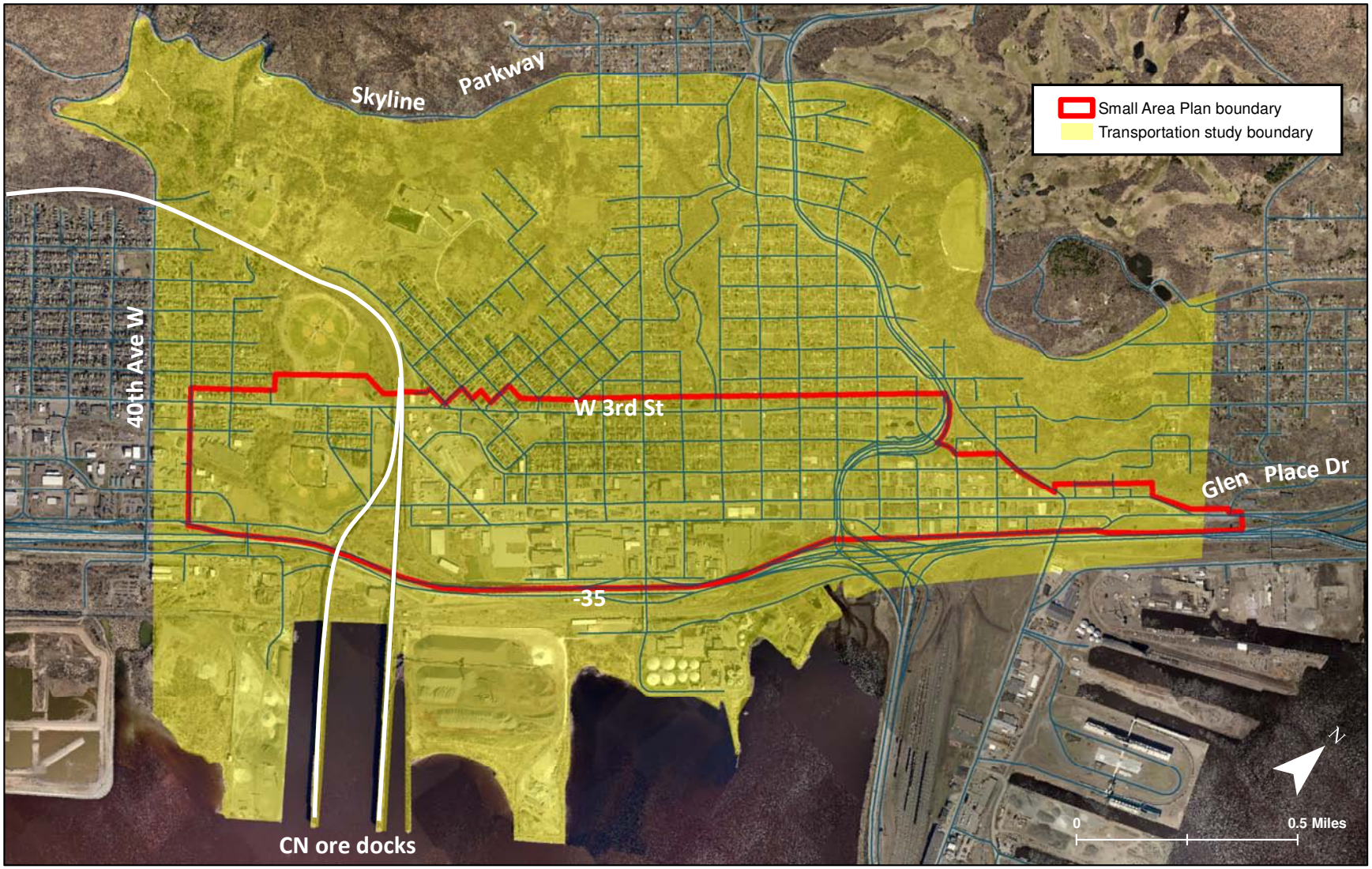
The study was undertaken to assess the issues and opportunities regarding the surface transportation assets within the neighborhood. It considered multiple modes of surface transportation: personal automobiles, commercial trucking, public transit, walking, and biking. One mode the study did not look extensively at was rail, for the reason that the rail assets in the neighborhood are privately held and would not typically be a focus of public investment. The exception to this is at-grade crossings. Only one such crossing exists in the study area (just NW of W 9th Street & 40th Avenue W), and a cursory assessment of the crossing and its crash history indicated no existing issues.

In general, the aim of the study was to identify ways in which the public transportation assets within the neighborhood can be improved for the residents, businesses, and visitors of Lincoln Park. While the city's SAP only considered a portion of the neighborhood below W 3rd Street, the area of analysis for this study encompassed the entire neighborhood, as well as the area between 40th Avenue W and the CN ore docks (see Map 1.2 on the following page). The


Image source: Bing Maps (2014)

**Map 1.1 | The Lincoln Park neighborhood in Duluth, MN**

This plan focuses on the approximately 2.2 square-mile neighborhood at the base of MN Highway 53, southwest of the downtown. The area is home to more than 6,300 residents and contains grade schools and the Lake Superior Community College. Several businesses exist in the neighborhood, including industrial operations near and along the waterfront of the St. Louis River.




**M a p 1.2 | Study area boundaries**

This transportation study looked at conditions within the area shown in yellow. The area identified by the red boundary is the focus of the City of Duluth's Small Area Plan (SAP) for the neighborhood, which was principally concerned with issues related to the existing land use regulations within that area.

larger study area was chosen in order to consider issues of accessibility and connectivity between the neighborhood's residential areas and nearby centers of commercial, employment, and recreational activities.

## The Planning Context

The study was conducted from the combined vantage of three planning perspectives: multi-modal integration, optimizing public investment, and identifying future opportunities.

*A "multi-modal" perspective:*

The Federal Highway Administration (FHWA) defines "multi-modal" as, "the availability of transportation options using different modes within a transportation system or travel corridor."[1] Although FHWA's definition emphasizes the availability of transportation options, this study also considers the subject of multi-modalism to include aspects of connectivity, integration, mobility, and the safety of such options.

*A "public investment" perspective:*

The City of Duluth has 28 different neighborhoods that span over an 87 square mile area. It likewise manages a large network of public transportation utilities and maintains over 400 miles of city streets and roadways, more than 400 miles of sidewalks, and 2 miles (and growing) of paved, off-street trails. In addition, it helps finance a transit service that serves a network of more than 150 miles of transit routes, all while facing increasing maintenance costs alongside a revenue stream that has remained virtually flat year after year. This reality remained a principal consideration while performing work on this study, and it influenced how the information and final recommendations of the study are being presented in this document.

*A "future opportunities" perspective*

Lastly, the study was carried out in the interest of identifying potential opportunities to strengthen multi-modal connections and enhance multi-modal options within the neighborhood in the coming years. This includes opportunities to create new connections and to expand existing networks in ways that could accomplish multiple community objectives. While it is understood that not all such opportunities can be pursued, it is hoped that the findings of this study will call the attention of city staff and community stakeholders to the "menu" of possible actions which they can further investigate, prioritize, and pursue in future planning efforts.


Image source: MIC (2014)

**Figure 1.1 | US Highway 53 overpass at 22nd Avenue W**

This image exemplifies the multiple perspectives from which this study was approached. The recently constructed Cross City Trail intersects existing streets and travels through the footprint of the "Can of Worms" overpass, which will need to be replaced in less than 20 years. In what ways can the planning for, integration of, and investment in these public infrastructure be optimized?

## Study Objectives

While the broader goal of this study has been to improve the public transportation assets in Lincoln Park in ways that capitalize on opportunities, support multi-modalism, and optimize public investment, the study was also conducted to achieve the following planning objectives specifically:

1. Identify ways to **improve access** to public transportation assets for residents, businesses, and visitors within the study area.
2. Recommend ways that future investments **increase transportation choices** for residents, businesses, and visitors within the study area.
3. Identify ways to **create or improve connections** among existing assets that better **integrate the various modes** of transportation.
4. Uncover opportunities to better utilize or make improvements to public assets in ways that **achieve greater transportation efficiencies** in terms of operations and/or maintenance.
5. Seek to **improve transportation safety** by identifying any existing hazards or potential conflicts that might be addressed through improvements to existing transportation assets.
6. Identify ways to **enhance economic and social vitality** through improvements to the existing transportation assets in the study area.
7. **Support social and environmental justice** by calling attention to ways that existing or future public transportation assets and services might disproportionally impact low-income or minority populations within the metropolitan area.

## Study Limitations

This study was subject to limitations regarding both time and financial resources. As scoped, the project was conducted within a year, with limited staffing, and relied primarily on existing data produced by secondary sources. As a consequence, support for some findings is stronger than others and is the reason that a number of the study's recommendations call for additional monitoring or the gathering of additional data.

# 2. Stakeholder Input

This chapter describes the process that was used to achieve meaningful stakeholder involvement in the Lincoln Park Multimodal Transportation Study and its eventual recommendations. It provides a record of the stakeholder engagement activities that the MIC participated in and a summary of the various input received from those efforts.

## Coordinated Engagement

Because the MIC carried out this study concurrent with the City of Duluth's development of a Small Area Plan (SAP) for the neighborhood, there was a opportunity to collaborate stakeholder engagement efforts between staff from the MIC and staff of the City of Duluth Planning Department. The MIC was, therefore, able to use the city's SAP stakeholder committee in addition to its own Transportation Advisory Committee (TAC) to help steer its study activities. This allowed for a unique model of information exchange between the planners and public officials involved in the two different initiatives, and the neighborhood residents, business interests, transportation professionals, and elected officials. (Figure 2.1).

The coordination between the MIC's study and the city's SAP process helped to keep the exchange of information and ideas current, regular, and meaningful between the two initiatives. It also provided greater convenience and minimized confusion for stakeholders in terms of disseminating information and public notices. Within this framework, the MIC was able to engage stakeholders with transportation-specific information and gather transportation-specific input while creating and retaining links to

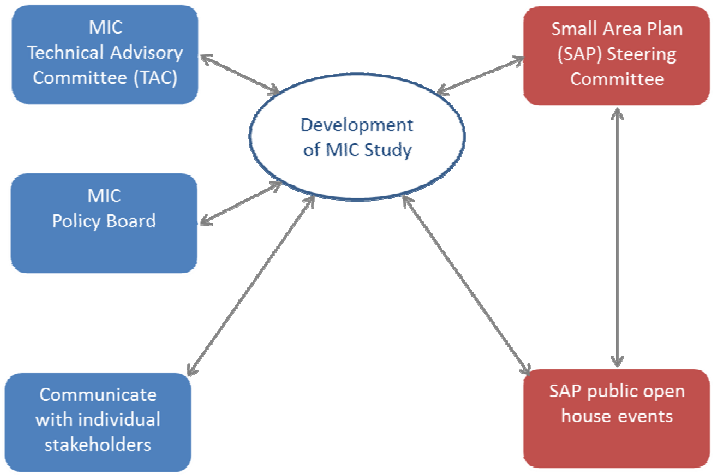



**Figure 2.1 | Coordinated stakeholder engagement model**

The study process was designed to facilitate multiple paths of information sharing between public officials, transportation professionals, neighborhood stakeholders, and elected representatives.

the other community concerns and objectives established through the SAP process.

## Project Advisory Committees

The City of Duluth Planning Department established a 17 member committee made up of various public and private interests to help steer the development of its Lincoln Park Small Area Plan (SAP). Table 2.1 lists the entities that participated in monthly SAP meetings to help steer the development of the city's SAP plan. The MIC engaged this same group with reports on the progress and findings of its study. The unique experiences and expertise of these various stakeholders provided insight that helped to direct and refine study activities. The SAP members also helped to vet recommendations that the MIC eventually put forth based findings of the study.

The MIC also used its own TAC as a second body to help steer the progression of the study. This group consists of transportation planning and engineering professionals from the region, whose expertise was used to help guide the study from a technical perspective. The organizations represented on the TAC are listed in Table 2.2.

## MIC Stakeholder Engagement Strategy

Beyond the collective insight and expertise of the two advisory committees described above, the MIC staff sought to also engage a broad range of other groups with an interest or stake in transportation and land use issues within the Lincoln Park neighborhood. To do this, the MIC staff formulated a stakeholder engagement strategy as part of its project scoping process at the outset of the study. From this, the following

**Table 2.1 | Stakeholders representing the City of Duluth's Lincoln Park Small Area Plan (SAP) committee**

1. Lincoln Park residents
2. Lincoln Park business owners
3. City of Duluth, Housing and Redevelopment Authority
4. City of Duluth, Parks and Recreation
5. Community Action Duluth
6. Duluth Economic Development Authority (DEDA)
7. Duluth Local Initiatives Support Corporation (LISC)
8. City of Duluth, Planning
9. Duluth Port Authority
10. Duluth-Superior Metropolitan Interstate Council (MIC)
11. Duluth Transit Authority
12. Ecoloibrium3
13. Independent School District 709
14. Lincoln Park Business Group (LPBG)
15. MN Department of Health
16. Native Alliance Duluth
17. St. Louis County Public Health & Human Services

**Table 2.2 | Professional transportation stakeholders representing the MIC Technical Advisory Committee (TAC)**

1. Duluth Airport Authority
2. Bike/Pedestrian Advocate
3. City of Duluth Planning Dept.
4. City of Duluth Public Works
5. City of Hermantown
6. City of Proctor, City Administration
7. City of Superior, Planning Dept.
8. City of Superior, Traffic Engineering
9. Douglas County, WI, Highway Dept.
10. Duluth Seaway Port Authority
11. Duluth Transit Authority
12. MN Dept. of Employment & Economic Development
13. MnDOT District 1, Planning
14. St. Louis County, MN, Highway Dept.
15. WisDOT NW Region, Planning

stakeholder-engagement objectives were identified:

1. Engage stakeholders in identifying specific issues and opportunities.
2. Ensure a balance of modal perspectives throughout the study.
3. Provide and advertise access for input at any time.
4. Use stakeholders to vet final recommendations.
5. Seek to coordinate and capitalize on (not confuse) the City of Duluth's SAP outreach efforts.

*Identifying Key Stakeholders:*

The engagement strategy began with a general inventory of various transportation stakeholders in the neighborhood. This was followed up with a review of the stakeholders represented on the city's SAP steering committee to determine if there were underrepresented interests with respect to transportation specific issues in the neighborhood, or any stakeholder groups that the MIC should seek more in-depth input regarding transportation in issues and opportunities in the neighborhood. Given that the neighborhood has a relatively high percentage of lower income households, as well as a high number of businesses with substantial daily freight operations, it was deemed that the MIC should work to ensure significant and detailed input from these groups. The resulting list of key stakeholder groups is shown in Table 2.3 at right.

*Phone and In-person Interviews:*

MIC staff then sought to interview representatives from the groups listed in Table 2.3 either through private meetings, phone interviews, or email correspondence. Notes were compiled from these interviews and were reviewed for accuracy

**Table 2.3 | Key stakeholders identified for one-on-one engagement**

1. City of Duluth, Public Works - Engineering
2. City of Duluth, Parks& Recreation - Trails & Bikeways Coordinator
3. Commercial Trucking - Private operators
4. Community Action Duluth - Transportation Advocate
5. Duluth Fire Department - Fire Marshall
6. Duluth Seaway Port Authority - Facilities Manager
7. Duluth Transit Authority- Planning & Operations
8. Independent School District 709 - Transportation Director
9. Lincoln Park Business Group
10. Midtowne Manor - Property Manager
11. MnDOT District 1 - Planning
12. Western Lake Superior Sanitary District (WLSSD) - Planning

by members of those specific groups following the meetings.

A staff member from St. Louis County Health & Human Services assisted the MIC and the SAP Steering Committee by making site visits at several locations throughout the neighborhood and doing one-on-one interviews with low-income residents of the neighborhood. A summary of transportation-related comments were shared with the MIC and were regularly referred to and considered as work progressed with the study.

*Focused Survey:*

A short survey was designed to collect input from low-income residents of the Lincoln Park neighborhood. The survey questions were specifically about pedestrian, bike, and transit perceptions of this sub-population of the neighborhood. Because the MIC has historically had difficulty engaging low-income individuals in the region, staff from Community Action Duluth and St. Louis County Health & Human Services assisted in distributing the surveys. Despite the extra effort, however, only a few of the surveys were filled out.

*Web-based Tools:*

A project-specific webpage for the Lincoln Park Multimodal Study (www.dsmic.org/lpmms) was hosted on the MIC website. Stakeholders were informed during interviews and other outreach efforts that the webpage was available for them to find additional information or leave comments. The MIC staff also informed these stakeholders of related web-based materials made available through other webpages hosted by the City of Duluth and Exolibrium3.

*Public meetings and open houses:*

The City of Duluth Planning Department facilitated two public presentations and open house forums to inform neighborhood stakeholders of the SAP. Both events were held at the Harrison Community Club. The purpose of the first meeting, held on September 17th, 2014, was to inform the neighborhood of the study and gather initial input. The second meeting was held on March 25th, 2015 and was used to present and get feedback on draft recommendations. MIC staff assisted in events as both SAP participants and as experts to address transportation-specific issues and questions. Notes of the comments received during these events can be found in Appendix C (page, 140).


**Figure 2.2 | Project webpage**

A project page was hosted on the MIC's website. It provided visitors with a variety of ways to get information and provide comment.

## Mapping and Referencing the Input Received

The various input received from stakeholders during the study was compiled, summarized, and referred to as the project progressed. Input that was pertinent to specific locations were noted on maps in order to continue taking stock of multiple issues and/or opportunities as the MIC staff continued to study the neighborhood. Maps 2.1 through 2.4 on the following pages, summarize much of the comments that the MIC gathered during the project.

In general, the MIC achieved the aim of getting a balance of comments that reflected the multiple modes of surface transportation that the study was focused on: motor vehicles, heavy trucks, transit, and active transportation. Active transportation issues represent the greatest number of comments received, and mostly regarding specific sidewalk segments that are in disrepair.

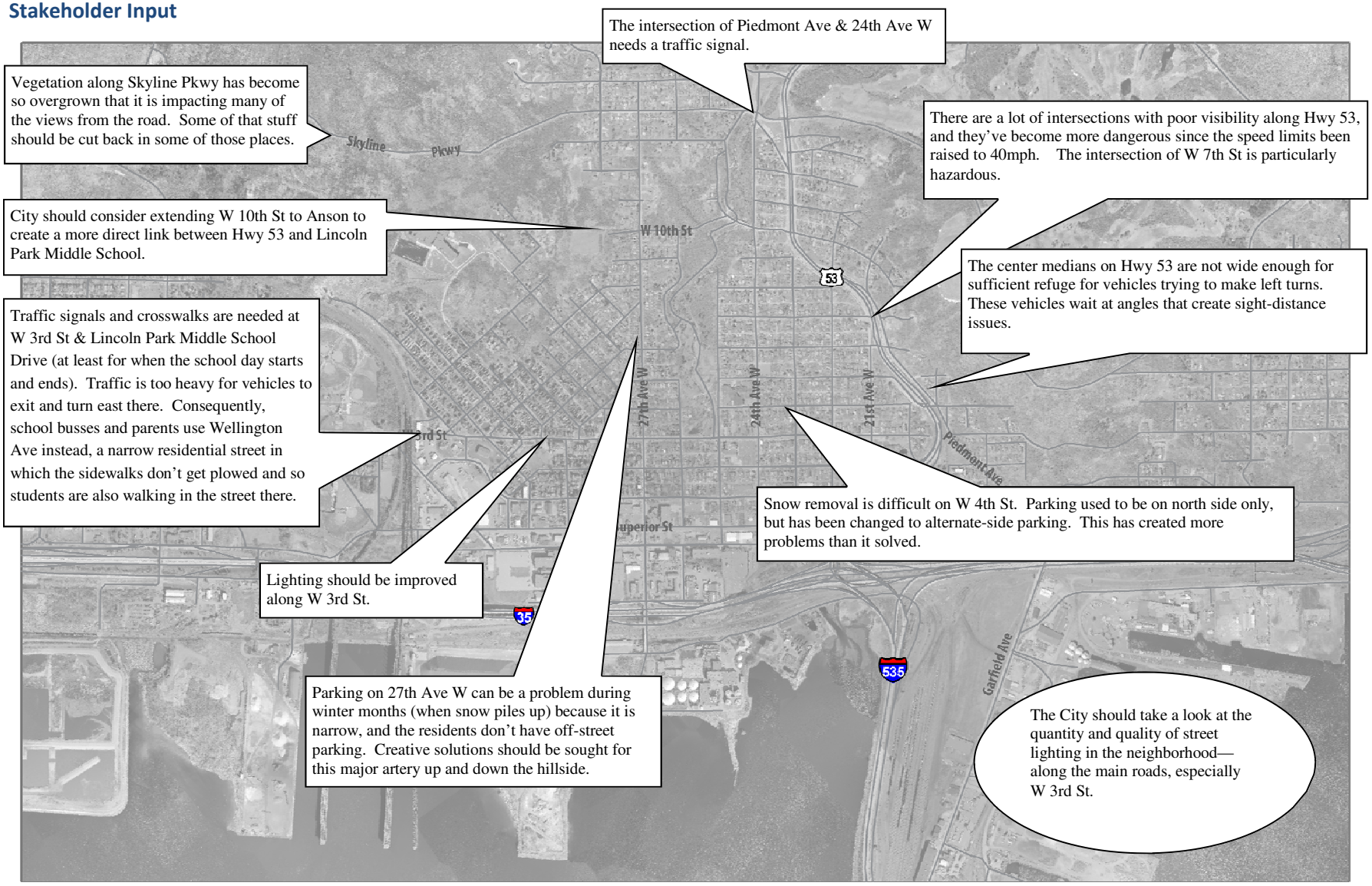
As staff assessed conditions related to each of the modes, they compared the comments received with the data and observations collected to interpret findings and develop recommendations. In a number of cases, comments received called attention to specific concerns which caused staff to collect additional data or broaden an existing assessment in order to address those concerns. In this way, the stakeholder input was invaluable to the study.

Lastly, stakeholder input gathered as part of the city's SAP process was also referenced throughout this study. Issues and opportunities regarding parking in the business district, way-finding, and improving connections between recreational assets and activity centers in the neighborhood are also reflected in the final recommendations of this study.


Image source: MIC (2015)

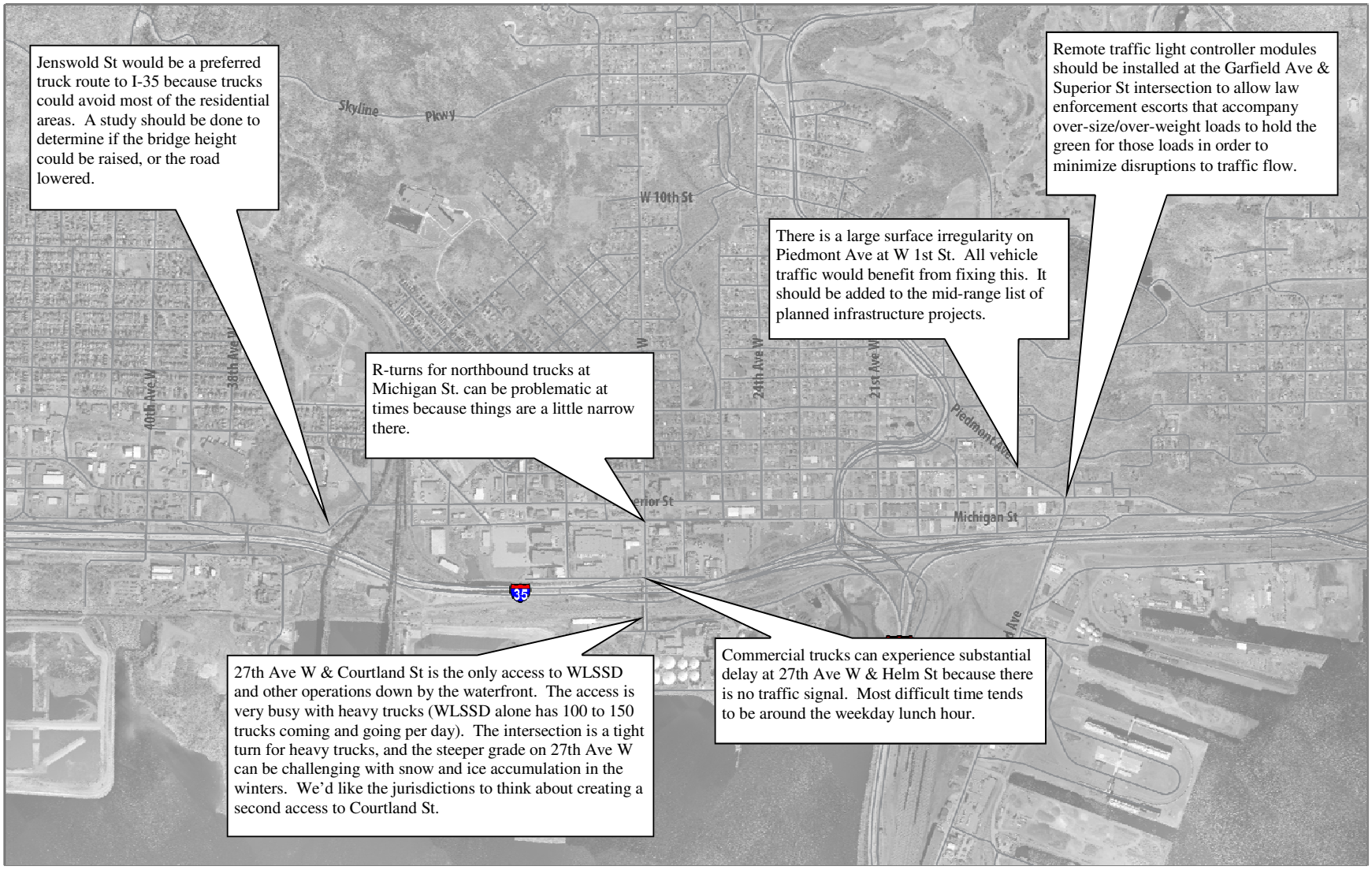
**Figure 2.3 | Heavy commercial truck crossing the Cross City Trail in Lincoln Park**

The image represents the coexistence of multiple user groups in Lincoln Park. Motorists, heavy trucks, and cyclists and pedestrians each have different interests and needs. The MIC sought meaningful input from multiple stakeholders in hopes of better addressing those needs and finding ways to improve integration among the different modes.



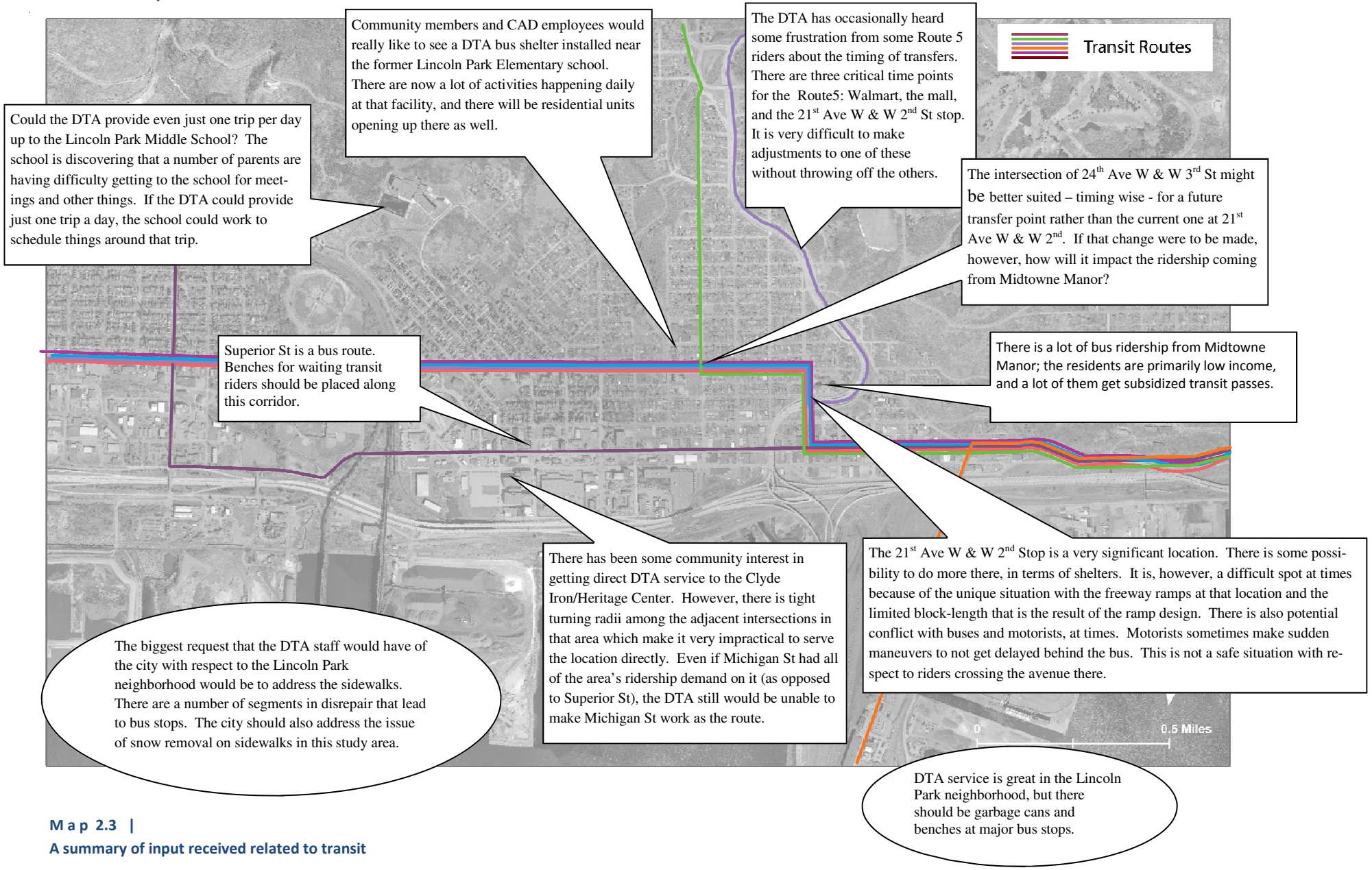

**Map 2.1 | A summary of input received related to motor vehicles**

The map above contains a summary of comments related to motor vehicle issues in the Lincoln Park neighborhood. These comments were collected as part of the MIC's stakeholder outreach effort for that study. Most of the comments received were area or location-specific, as displayed in the map.




**Map 2.2 | A summary of input received related to Heavy Trucks**

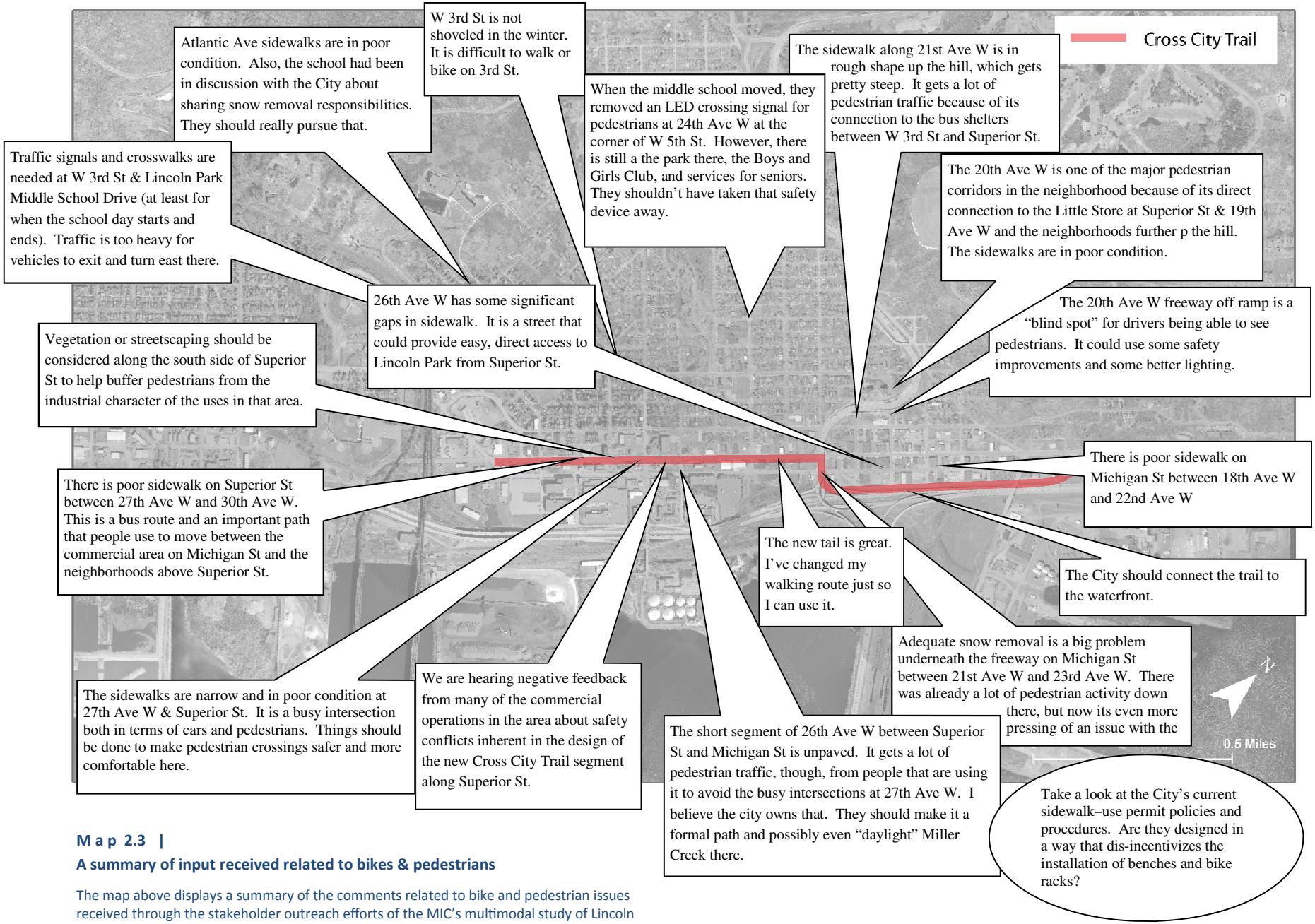
The comments shown in the map are specific to heavy truck related issues in the Lincoln Park neighborhood. The comments were gathered as part of the MIC's multimodal study of the neighborhood and represent a summary of issues called out by representatives of the Duluth Port Authority, Duluth Fire Department, WLSSD, and trucking related businesses that utilize the road network within the study area.




**Map 2.3 |**

**A summary of input received related to transit**

The comments shown in the map above relate to transit specific issues and opportunities in the Lincoln Park neighborhood. They are a summary of the comments received from DTA staff members, transit riders, and other stakeholders in the area.




**Map 2.3 |**

**A summary of input received related to bikes & pedestrians**

The map above displays a summary of the comments related to bike and pedestrian issues received through the stakeholder outreach efforts of the MIC's multimodal study of Lincoln Park. The newly built segment of the Cross City Trail is shown in pink, since a number comments were either about the trail or made reference to the trail.